

IFA AGRICULTURE CONFERENCE

Kunming, China – 27 February – 2 March 2006



Optimizing Resource Use Efficiency for Sustainable Intensification of Agriculture

TERRACOTTEM SOIL CONDITIONER (University of Ghent – BELGIUM)

In 1983, Prof. Dr. Willem Van Cotthem and a team of scientists at the Laboratory of Plant Morphology, Systematics and Ecology of the University of Ghent (Belgium) started researching a method which would enable plants to grow with a minimal supply of water in arid and semi-arid regions, in order to combat desertification and to alleviate poverty. Experimenting with a new generation of hydro-absorbent materials, the team from Ghent found that by mixing specific hydroabsorbent polymers with specific fertilizers and root growth activators, a superior soil conditioning compound was attained, which produced remarkable and swift results. More than ten years of field trials were conclusive: even in the poorest soil conditions on different continents, a wide variety of trees, grasses, vegetables and herbs flourished, reversing the devastating pattern of desert encroachment, deforestation and wind erosion.

The TerraCottem® soil conditioner is the original proprietary mixture of more than twenty hydroabsorbent and nutritive components that work in synergy, more effectively than any single polymer or fertilizer, to significantly increase the capability of soils and growing media to retain and provide water and nutrients, to improve plant and root growth, and to reduce the amount of water necessary to create high-quality plants and grass (turf). Originally developed to combat desertification through worldwide humanitarian projects, the product is used today in more than forty-five countries to reduce water consumption in agriculture, landscaping, sports and golf turf, horticulture, reforestation and gardening.

By absorbing water and nutrients, normally be lost through runoff or evaporation, and by providing plants and turf with a consistent, readily available source of water and nutritive elements, TerraCottem® improves the water retention capacity of soils and substrates, improving soil structure and aeration, increasing root growth, enhancing fertilizer availability and reducing the occurrence of transplantation shock, water stress and resultant plant loss. The product is particularly suited for application in degraded or problematic soils and root zones with poor capillarity, e.g. sandy soils, containers, pots, industrial or municipal areas where little or no maintenance (irrigation, fertilization, soil treatment) is performed, and to improve the quality and performance of substrates.

The posters show some general characteristics of the soil conditioner and a series of pictures on a project at the Cape Verdian Islands (Western Africa), where the product was successfully tested on rainfed production of different vegetables (potato, tomato, sweet potato, cabbage, etc.).



1987 CABO VERDE CURRALINHO 15
Local farmers happy with potato production without any watering, only rainfed and rain stocked in TerraCottem soil conditioner.



1987 CABO VERDE CURRALINHO 20
Top row left: Tomatoes without TC – Top row right : Tomatoes with TC.
Second row left: Cabbages without TC – Second row right: Cabbages with TC.
Third row: Tomatoes without TC.
Fourth row: Sweet potato with TC.

THE PRODUCT

A mixture of the best-performing potassium- and ammonium-based, organic, hydroabsorbent polymers increases the capacity of soils or substrates to retain and provide water and nutrients to the plant roots.

A starter component of soluble and slow-release mineral and organic fertilizers plays an important role during the initial growth phase of plants, and for many months after.

Trace amounts of a growth activating agent encourage extensive root development in the initial growth phase.

Carrier material allows for homogeneous distribution of all components, and contributes to better aeration.

THE BENEFITS

Water savings

reduced use of water
reduced runoff and evaporation
reduced drought stress

Fertilizer savings

less fertilizer runoff
and leaching
less salinity damage

Soil conditioning

increased microbiological activity
compaction relief
increased aeration

Plant growth

- More complete and faster development of biomass
- Deeper and stronger root development
- More flowers
- Longer flowering season
- Better fruit production
- Better plant quality
- Enhanced yield

THE APPLICATIONS

- Landscaping (including reforestation, afforestation, land reclamation, roof gardens, etc...)
- Sports turf (golf & football/soccer)
- Horticulture (gardening)
- Home & garden

TC-DIALOGUE FOUNDATION

The product's inventor, Prof. Dr. Van Cotthem, continues his work today as the President of TC-Dialogue Foundation. Established in 1995 and funded by a percentage on the worldwide TerraCottem sales, the non-profit TC-DIALOGUE Foundation maintains an important link between the TerraCottem® product and its origins in United Nations' and other humanitarian projects.

The Foundation's mission is:

To help communities and rural people in the drylands, facing ecological and economic obstacles to become self-sufficient, in improving their environment and in increasing their standards of living by using the TerraCottem® and other methods. The Foundation allows Dr. Van Cotthem to fulfill his original goals of providing assistance and solutions to humanitarian causes worldwide in combating the major problems facing our world today: hunger, drought and desertification.

TC Dialogue is a non-profit organization and dependent upon sponsorship and donations for its continuing development. For more information, please contact Prof. W. Van Cotthem directly at the following address:

Beeweg36 – B 9080 ZAFFELARE - Belgium

TC - Dialogue Foundation - Tel (32) 9/356 86 16 - Fax (32) 9/356 72 85

E-mail : info@tcdialogue.be

Website <http://www.tcdialogue.be>